



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

400 Seventh Street, S.W.
Washington, D.C. 20590

SEP 7 2005

DOT-E 14204

EXPIRATION DATE: August 31, 2007

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Great Lakes Chemical Corporation
West Lafayette, IN
2. PURPOSE AND LIMITATION:
 - a. This exemption authorizes the transportation in commerce of bromine in a 10 gallon UN 1N1 Monel drum that does not have a cap seal and is not overpacked in a UN 1A2 or UN 1H2 drum. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.226 (b) and (d) in that the drums which do not have a cap seal and which are not shipped in an outer UN 1A2 or UN 1H2 drum are not authorized, except as specified herein.
5. BASIS: This exemption is based on the application of Great Lakes Chemical Corporation dated May 27, 2005, and additional information dated August 25, 2005, submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

| Hazardous Materials Description | | | |
|---------------------------------|---------------------------|-----------------------|------------------|
| Proper Shipping Name | Hazard Class/ Division | Identification Number | Packing Group |
| Bromine | 8 | UN1744 | I, Hazard Zone A |

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a 10 gallon UN 1N1 monel drum meeting the package description in TEN-E test report 04-1277, dated December 16, 2004 on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA), with minimum thicknesses as indicated below:

| | |
|--------------|--------------------|
| Drum body - | 14 gauge (1.9 mm) |
| Drum heads - | 14 gauge (1.9 mm) |
| Foot rings - | 12 gauge (2.67 mm) |

The top of the drum contains two NPS threaded openings, one 2 inch, and one $\frac{3}{4}$ ", which are closed with monel threaded plugs and Teflon gaskets. The monel plugs must meet the specifications in TEN-E test report 04-1277 and must be torqued in accordance the specifications in the report. After torquing the plugs, the two plugs are safety wired to ensure they will not loosen during transportation and sealed with a tamper evident seal.

b. TESTING -

(1) Each drum must be capable of passing a hydrostatic pressure test in accordance with 49 CFR 178.605 at a test pressure of 1,650 kPa (239 psig).

(2) Each drum must be capable of passing a random vibration test in accordance with ASTM-D4728, assurance level 1, in both the upright and inverted orientation.

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(3) Each drum must be capable of passing the "Puncture Test" indicated in TEN-E Report Number 04-1277 on file with OHMEA, at a drop height of 85 inches.

c. OPERATIONAL CONTROLS -

(1) No new construction of these drums is authorized.

(2) Great Lakes Chemical Corporation must track each drum electronically by serial number.

(3) Drums, full or empty, may only be shipped in a stretch-wrapped, palletized configuration, with no more than 5 full drums or 9 empty drums on each pallet.

(4) No more than 25 filled drums may be shipped in one closed transport vehicle.

(5) Drums may not be stacked and no other materials may be placed on the drums in transportation.

(6) Drum openings and threaded plugs must be inspected prior to each use to ensure they meet the design and use criteria. Drums with worn threads, or plugs with worn threads must be removed from service. New Teflon gaskets must be installed each time the drums are filled.

(7) Drums must be inspected externally and internally prior to refilling. The internal inspection must be performed with a borescope.

(8) Prior to shipment, each drum must be held in the horizontal position for one minute and observed for leakage. Leaking drums must have the gaskets replaced and be resealed.

(9) All pallets must be securely blocked and braced prior to transportation.

(10) Transportation is authorized by contract motor carrier only, under the exclusive use of Great Lakes Chemical Corporation.

8. SPECIAL PROVISIONS: A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each motor vehicle used to transport packages covered by this exemption.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this exemption must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.
- Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.
- No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.
12. REPORTING REQUIREMENTS: Shipments or operations conducted under this exemption are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials

incident reports. In addition, the grantee(s) of this exemption must notify the Associate Administrator for Hazardous Materials Safety -- OHMEA, in writing, of any incident involving a package, shipment or operation conducted under terms of this exemption.

Issued in Washington, D.C.



for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

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DATE

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: DBurger